



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

February 20, 2019

Carrie Tackema  
Regulatory Manager  
Nufarm Americas, Inc.  
4020 Aerial Center Parkway, Suite 101  
Morrisville, NC 27560

Subject: Registration Review Label Mitigation for Sulfometuron Methyl  
Product Name: Spyder Selective Herbicide  
Application Date: 10/10/17  
EPA Registration Number: 228-408  
Decision Number: 540318

Dear Ms. Tackema:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all of the information submitted with your application to support the Registration Review of the above referenced product in connection with the 22 Sulfonylurea (SU) Herbicides Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

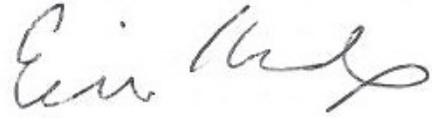
Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions about this letter, please contact Erik Kraft by phone at 703-308-9358, or via email at [kraft.erik@epa.gov](mailto:kraft.erik@epa.gov).

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Sincerely,

A handwritten signature in black ink, appearing to read "Erik Kraft". The signature is written in a cursive style with a large, sweeping flourish at the end.

Erik Kraft, Product Manager 24  
Fungicide and Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure

# Spyder<sup>®</sup> Selective Herbicide

[ABN: Riverdale Spyder<sup>®</sup> Herbicide]

DISPERSIBLE GRANULES FOR BOTH PREEMERGENCE AND POSTEMERGENCE CONTROL OF MANY ANNUAL AND PERENNIAL GRASSES AND BROADLEAF WEEDS; CONIFER AND HARDWOOD SITE PREPARATION AND RELEASE; WEED CONTROL IN NONCROP INDUSTRIAL SITES; AND CAN BE TANK MIXED WITH OTHER HERBICIDES FOR USE IN FORESTRY AND NON-CROP SITES.

**ACTIVE INGREDIENT:**

Sulfometuron methyl (Methyl 2-[[[(4,6-dimethyl-2-pyrimidinyl)amino] - Carbonyl]amino]sulfonyl benzoate ..... 75.0%

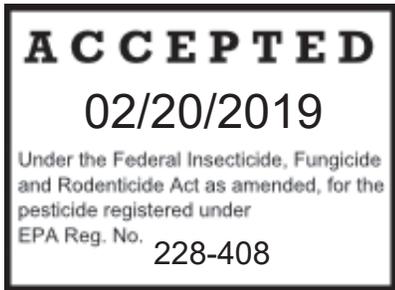
**OTHER INGREDIENTS:** ..... 25.0%

**TOTAL:** ..... 100.0%

<p><b>KEEP OUT OF REACH OF CHILDREN</b>  <b>CAUTION / PRECAUCION</b></p> <p>Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.          (If you do not understand the label, find someone to explain it to you in detail.)</p> <p><b>SEE BELOW [INSIDE][BOOKLET] FOR FIRST AID [AND] ADDITIONAL PRECAUTIONARY STATEMENTS [DIRECTIONS FOR USE] [STORAGE AND DISPOSAL]</b></p>
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For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300  
 For Medical Emergencies Only, Call (877) 325-1840

FIRST AID	
<b>IF IN EYES</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-325-1840 for emergency medical treatment information.	



EPA REG. NO. 228-408  
 EPA EST. NO.

NET CONTENTS:

00228-00408.20190220.draft

MANUFACTURED FOR  
 NUFARM AMERICAS INC.  
 11901 S. AUSTIN AVE.  
 ALSIP, IL 60803

**PRECAUTIONARY STATEMENT  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION / PRECAUCION**

Causes moderate eye irritation. Avoid contact with eyes or clothing.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):**

All mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirt
- Long pants
- Shoes plus socks

See engineering controls for more requirements.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

**ENGINEERING CONTROLS:**

Pilots must use an enclosed cockpit in a manner that is consistent with the WPS for Agriculture Pesticides [40 CFR170.240(d)(6)].

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**USER SAFETY RECOMMENDATIONS**

**Users Should:**

- Wash hands after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

For terrestrial uses, except for uses under the forest canopy. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

Exposure to this product can injure or kill plants. Damage to susceptible plants can occur when soil particles are blown or washed off target onto cropland.

**Groundwater Advisory:** Sulfometuron-methyl is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

**Surface Water Advisory:** This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of sulfometuron-methyl from runoff water and sediment. Runoff of this product will be greatly reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read the entire label before using this product. Use strictly in accordance with label precautionary statements and directions. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency in your State responsible for pesticide regulation.

## MANDATORY SPRAY DRIFT

### Aerial Applications:

- Do not release spray at a height greater than 10 ft. above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use an Extremely Coarse or coarser droplet size (ASABE S572.1) for all applications.
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 mph at the application site.
- Do not apply during temperature inversions.

### Ground Boom Applications:

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 ft. above the ground or crop canopy unless making a turf, pasture, or rangeland application, in which case applicators may apply with a nozzle height no more than 4 ft. above the ground.
- Applicators are required to use an Extremely Coarse or coarser droplet size (ASABE S572.1) for all applications.
- Do not apply when wind speeds exceed 10 mph at the application site.
- Do not apply during temperature inversions.

### Boom-less Ground Applications:

- Applicators are required to use an Extremely Coarse or coarser droplet size (ASABE S572.1) for all applications.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

## SPRAY DRIFT ADVISORIES

### Boom-less Ground Applications:

- Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

### Handheld Technology Applications:

- Take precautions to minimize spray drift.

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

### **IMPORTANCE OF DROPLET SIZE**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under environmental conditions.

#### **Controlling Droplet Size – Ground Boom**

- *Volume* – Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- *Pressure* – Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- *Spray Nozzle* – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

#### **Controlling Droplet Size – Aircraft**

- *Adjust Nozzles* – Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

#### **Boom Height – Ground Boom**

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### **Release Height – Aircraft**

Higher release heights increase the potential for spray drift. When applying aurally to crops, do not release spray at a height greater than 10 ft. above the crop canopy, unless a greater application height is necessary for pilot safety.

### **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

## TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

## TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

## WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

**Non-target Organism Advisory:** This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by minimizing spray drift. For further guidance and instructions on how to minimize spray drift, refer to the **Spray Drift Management** section of this label.

**Windblown Soil Particles Restriction:** Applications may not be made to soil that is subject to wind erosion when less than a 60% chance of rainfall is predicted to occur in the treatment area within 48 hours. Soils that are subject to wind erosion usually have a high silt and/or fine to very fine sand fractions. Soils with low organic matter also tend to be prone to wind erosion.

## Maximum Rate – Annual

- Do not apply more than 8.0 ounces of this product per acre per year\*.
- Do not apply more than 0.375 lbs. of the active ingredient sulfometuron-methyl per acre per year when using any combination of products containing sulfometuron-methyl.
- Do not apply more than two applications per year for all uses with a minimum of 30 days between applications.

\*8 oz. of this product contains 0.375 lbs. of the active ingredient sulfometuron-methyl

## Maximum Rate – Single Application (Agricultural Site)

- Do not apply more than 4.25 ounces of this product per acre\*.
- Do not apply more than 0.20 lbs. of the active ingredient sulfometuron-methyl per acre when using any combination of products containing sulfometuron-methyl.

\*4.25 oz. of this product contains 0.20 lbs. of the active ingredient sulfometuron-methyl

## Maximum Rate – Single Application (Non-Agricultural Site)

- Do not apply more than 6.0 ounces of this product per acre\*.
- Do not apply more than 0.281 lbs. of the active ingredient sulfometuron-methyl per acre when using any combination of products containing sulfometuron-methyl.

\*6 ounces of this product contains 0.281 lbs. of the active ingredient sulfometuron-methyl

## PRODUCT INFORMATION

This product is a dispersible granule that is mixed in water and applied as a spray. This product controls many annual and perennial grasses and broadleaf weeds in forestry and non-crop sites.

This product may be used for weed control on terrestrial non-crop sites and for selective weed control in certain types of unimproved turf grasses on industrial sites. It can also be used for selective weed control in forest site preparation and in the release of certain conifers and hardwoods. This product may be tank mixed with other herbicides registered for the use in forestry and non-crop sites. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

This product controls weeds by both preemergence and postemergence activity. Preemergence treatments control or suppress weeds through root uptake while postemergence control works through root and foliar uptake. The best results are obtained when the application is made before or during the early stages of weed growth before weeds develop an established root system. Moisture is required to move this product into the root zone of weeds for preemergence control. When rainfall is low, this product may not provide satisfactory control.

This product may be applied on forestry and non-crop sites that contain areas of temporary surface water caused by collection of water between planting beds, in equipment ruts, or in other depressions created by management activities. It is permissible to treat intermittent drainage, intermittently flooded low lying sites, seasonal dry flood plains and transitional areas between upland and lowland sites when no water is present. It is also permissible to treat marshes, swamps and bogs after water has receded, as well as seasonally dry flood deltas.

A drift control agent may be used at the manufacturer's specified rate in the application of this product.

For best postemergence results, apply this product to young, actively growing weeds. The use rate depends upon the weed species, weed size at application, and soil texture. The degree and duration of control may depend on the following: weed spectrum and infestation intensity; weed size at application; environmental conditions at and following treatment; and soil pH, soil moisture, and soil organic matter.

Use a high rate on established plants and on fine-textured soils and a lower rate on smaller weeds and coarse-textured soils.

#### **ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY**

This product is absorbed by both the roots and foliage of plants, rapidly inhibiting the growth of susceptible weeds. 2 to 3 weeks after application to weeds, leaf growth slows, and the growing points turn reddish-purple. Within 4 to 6 weeks of application, leaf veins and leaves become discolored, and the growing points subsequently die.

Warm, moist conditions following application accelerate the herbicidal activity of this product. Cold, dry conditions delay the herbicidal activity of this product. In addition, weeds hardened-off by drought stress are less susceptible to this product. Moisture is needed to move this product into the soil for preemergence weed control.

#### **INVASIVE SPECIES MANAGEMENT**

This product may be used on public, private, and tribal lands to treat certain weed species infestations that have been determined to be invasive, consistent with the Federal Interagency Committee for the Management of Noxious and Exotic Weeds (F1CMNEW). National Early Detection and Rapid Response (EDRR) System for invasive plants. Effective EDRR systems address invasions by eradicating the invader where possible, and controlling them when the invasive species is too established to be feasibly eradicated. Once an EDRR assessment has been completed and action is specified, a Rapid Response needs to be taken to quickly contain, deny reproduction, and if possible eliminate the invader. Consult your appropriate state extension service, forest service, or regional multidisciplinary invasive species management coordination team to determine the appropriate Rapid Response provisions and allowed treatments in your area.

#### **WEED RESISTANCE MANAGEMENT**

This product contains the active ingredient sulfometuron-methyl which is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 2 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance-management strategies should be followed. To delay herbicide resistance, take one or more of the following steps:

- Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Fields should be scouted after application to verify that the treatment was effective.
- Identify weeds present in the field through scouting and field history and understand their biology. The weed-control program should consider all of the weeds present.
- Suspected herbicide-resistant weeds may be identified by these indicators:
  - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  - A spreading patch of non-controlled plants of a particular weed species; and
  - Surviving plants mixed with controlled individuals of the same species.
- Contact your local sales representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of action for each target weed.
- Report any incidence of non-performance of this product against a particular weed species to your local sales representative or agricultural dealer.
- If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further seed production.
- Use a diversified approach toward weed management. Whenever possible incorporate multiple weed-control practices such as mechanical cultivation, biological management practices, and crop rotation.
- To the extent possible, do not allow weed escapes to produce seeds, roots or tubers.
- Difficult to control weeds may require sequential applications of herbicides with differing mechanisms of action.
- Apply this herbicide at the correct timing and rate needed to control the most difficult weeds in the field.
- Use a broad-spectrum soil-applied herbicide with a mechanism of action that differs from this product as a foundation in a weed-control program.
- Do not use more than two applications of this or any other herbicide with the same mechanism of action within a single growing season unless mixed with an herbicide with another mechanism of action with an overlapping spectrum for the difficult-to-control weeds.

#### **INTEGRATED PEST MANAGEMENT**

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

#### **PREPARING FOR USE – Site Specific Considerations**

Understanding the risks associated with the application is essential to aid in preventing off-site injury to desirable vegetation and agricultural crops. The risk of off-site movement both during and after application may be affected by a number of site specific factors, e.g. the nature, texture and stability of the soil, the intensity and direction of prevailing winds, vegetative

cover, site slope, rainfall, drainage patterns, and other local, physical and environmental conditions. A careful evaluation of the potential for off-site movement from the intended application site, including movement of treated soil by wind or water erosion, must be made prior to using this product. This evaluation is particularly critical where desirable vegetation or crops are grown on neighboring land for which the use of this product is not labeled. If prevailing local conditions may be expected to result in off-site movement and cause damage to neighboring desirable vegetation or agricultural crops, do not apply this product.

Before applying this product, the user must read and understand all label directions, precautions and restrictions completely; including, these requirements for a site specific evaluation. If the user does not understand any of the instructions or precautions on the label, or is unable to make a site specific evaluation, consult your local agricultural dealer, cooperative extension service, land managers, professional consultants, or other qualified authorities familiar with the area to be treated.

## AGRICULTURAL USES

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statement of this label about personal protective equipment (PPE) and restricted-entry interval (REI). The requirements in this box only apply to users of this product that are covered by the WPS.

**DO NOT** enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is: coveralls, shoes plus socks and chemical-resistant gloves made of any waterproof material.

## FORESTRY

### USE RESTRICTIONS - FORESTRY

- Do not apply more than 8.0 ounces (0.375 lb. ai) of this product per acre per year.
- Do not apply more than 4.25 ounces (0.20 lb. ai) of this product per acre per single application. Repeat applications may be made, however, do not exceed an additional 3.75 ounces (0.176 lb. ai) of this product per acre per year.
- Do not apply more than two applications per year for all uses with a minimum of 30 days between applications.
- Do not apply this product to conifers or hardwoods grown for Christmas trees or ornamentals.

### USE PRECAUTIONS - FORESTRY

- Applications of this product made with boomless nozzle spray equipment may cause severe injury to conifers and/or poor weed control performance due to the inherent variability (rate and coverage) in the uniformity of the application.
- Leave treated soil undisturbed to reduce the potential for movement of this product by soil erosion due to wind or water.
- Applications of this product made to trees, conifers, or hardwoods that are suffering from loss of vigor caused by insects, diseases, drought, winter damage, animal damage, excessive soil moisture, planting shock, previous agricultural practices, or other stresses, may injure or kill the trees.
- Applications of this product made for release (trees present) must only be made after adequate rainfall has closed the planting slit and settled the soil around the roots following transplanting.
- If a surfactant is used with this product, allowing the spray to contact tree foliage may injure or kill trees. The user assumes all responsibility for tree injury if a surfactant is used with this product if applied after planting.
- Applications of this product may result in damage and mortality to other species of trees when they are present on sites with those listed in the preceding instructions for forestry uses.
- Use on hardwood trees growing in soils having a pH of 7 or greater may injure or kill the trees.
- Careful consideration must be given by an experienced and knowledgeable forester to match the requirements of the hardwood tree species to the conditions of the site. Treatment of species mismatched to the site may injure or kill the trees.

### Application Information

This product is used to control many broadleaf weeds and grasses in forestry sites. Apply by ground equipment or by air via helicopter. Apply impregnated fertilizer by ground equipment or by air (helicopter or fixed-wing aircraft).

This product may be tank mixed with other herbicides registered for use in forestry. When tank mixing, use the most restrictive limitations from the product labeling. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

### Application Timing

Apply this product before herbaceous weeds emerge or shortly thereafter. Apply impregnated fertilizer before weeds emerge.

### Weeds Controlled

This product effectively controls the following weeds when applied at the use rates indicated for the respective crop species:

Chickweed	Goldenrod	Pokeweed
Crabgrass	Horseweed	Ragweed
Dogfennel	Kentucky bluegrass	Shepherd's purse
Fescue	Nutsedge (yellow)	White snakeroot
Fireweed (willow weed)	Panicum (broadleaf, fall, narrow)	Yellow sweetclover

See also weeds controlled under Application Information – Non-crop (Industrial) Sites

### Application Rates

Apply this product at the rates indicated by region. Use a low rate on coarse-textured soils (i.e., loamy sands, sandy loam) and a higher rate on fine-textured soils (i.e. sandy clay loams and silty clay loams).

## CONIFERS

### Conifer Site Preparation - Application Before Transplanting

Make all applications before transplanting to control herbaceous weeds.

**Southeast** - Apply 2.0 to 4.25 ounces (0.094-0.2 lb ai) per acre for loblolly, longleaf, slash, and Virginia pine. Pines may be transplanted in treated areas in the planting season following application.

**Northeast and Lake States** - Apply 2.0 to 4.0 ounces (0.094-0.188 lb. ai) per acre for black spruce. Transplant at least 13 months after treatment.

Apply 1.0 to 2.0 ounces (0.047-0.094 lb. ai) per acre for red pine. Transplant the following spring or summer but not less than 3 months after application. Areas receiving 0.5 to 1.0 ounce (0.023-0.047 lb. ai) per acre may be transplanted a minimum of 30 days following application.

**West** - Apply 2.0 to 4.0 ounces (0.094-0.188 lb. ai) per acre for coastal redwood, Douglas fir, grand fir, lodge pole pine, ponderosa pine, western larch, western white pine, and white fir. Where western red cedar is a primary species apply 2.0 to 3.0 ounces (0.094-0.14 lb. ai) per acre, as higher rates may cause unacceptable injury. Without prior experience, it is advised that small area plantings be tested for sensitivity to this product before large scale plantings are made. The user accepts all responsibility for injury on any conifer species not listed above to the extent consistent with applicable law.

For ponderosa pine in California and other arid areas, apply in the fall and transplant the following spring.

All Regions – Other species of conifers may be planted providing the user has experience indicating acceptable crop safety to this product.

### Conifer Release - Application After Transplanting

Apply this product after transplanting to control herbaceous weeds.

**Southeast** - Apply 2.0 to 4.25 ounces (0.094-0.2 lb. ai) per acre for loblolly, longleaf, slash or Virginia pine. Apply 1.0 to 1.5 ounces (0.047-0.070 lb. ai) per acre for eastern white pine. Apply 1.0 to 2.0 ounces (0.047-0.094 lb. ai) per acre for shortleaf pine.

To control a broader spectrum of weeds in stands of loblolly, longleaf, or slash pine, apply 2.0 to 4.0 ounces (0.094-0.188 lb. ai) of this product plus the labeled rate of Velpar L or Velpar DF. Use lower rates of both products on coarse sandy textured soils low in organic matter. Use higher rates on fine textured soils high in clay content or organic matter. For bare root seedlings, application may be made after sufficient rainfall has closed the planting slits. For containerized seedlings, assure there is significant root growth outside the plug prior to application. It is advised several trees be dug, inspected, and replanted to confirm root growth prior to application.

To enhance control of bermudagrass and Johnsongrass in stands of loblolly pine, apply 2.0 ounces (0.094 lb. ai) of this product plus the labeled rate of imazapyr (4 lb. ai/gal.). For the best results, make the application during late winter through spring when weeds first emerge. Imazapyr may temporarily inhibit pine growth if it is applied when pine is actively growing.

### Northeast and Lake States –

Apply 2.0 to 4.25 ounces (0.094-0.20 lb. ai) per acre for jack or Virginia pine.

Apply 1.0 to 1.5 ounces (0.047-0.070 lb. ai) per acre for eastern white pine.

Apply 1.5 to 3.0 ounces (0.070-0.14 lb. ai) per acre for white spruce.

Apply 0.5 to 2.0 ounces (0.023-0.094 lb. ai) per acre for red pine not less than 1 year following transplanting.

Make applications when trees are dormant. Applications at budbreak and later stages of active growth may severely injure or kill trees.

**West** - Apply 2.0 to 4.0 ounces (0.094-0.20 lb. ai) per acre for coastal redwood, Douglas fir, grand fir, hemlock, lodgepole pine, ponderosa pine, western larch, western white pine, and white fir. Where western red cedar is a primary species apply 2.0 to 3.0 ounces (0.094-0.14 lb. ai) per acre, as higher rates may cause unacceptable injury. Other species of conifers may be treated providing the user has experience indicating acceptable safety to this product. Without prior experience, it is advised that small areas be treated with this product to determine selectivity on specific conifer species before large scale treatments are made. The user accepts all responsibility for injury on any conifer species not listed above to the extent

consistent with applicable law. Dormant trees are less susceptible to injury. Applications where the spray comes into direct contact with conifers after dormancy break in the spring or before the final resting bud has hardened in the fall may severely injure or kill the trees. For ponderosa pine in California and other arid areas, this product needs to be applied over dormant seedlings in the spring following fall plantings or in the fall over dormant trees following spring planting.

## FERTILIZER IMPREGNATION

This product may be used to impregnate or coat dry bulk fertilizer to be applied on forested areas. Dry bulk fertilizer may be impregnated with this product for application in the establishment of loblolly and slash pine.

### IMPREGNATION

To impregnate the fertilizer, use a system consisting of a conveyor or closed drum used to blend dry bulk fertilizer. Some fertilizers including potassium nitrate, sodium nitrate and triple super phosphate are not compatible with this product. Diammonium phosphate, potassium chloride, 16-16-16 and 24-4-4 have been successfully used. Do not use this product on limestone.

If fertilizer materials are excessively dusty, use a suitable additive to reduce dust prior to impregnation. Dusty fertilizer may result in poor distribution and excessive risk of drift during application. The dry fertilizer must be properly impregnated and uniformly applied to avoid potential tree injury/mortality and poor weed control.

Consult the Application Rates section of this label for the appropriate rate of this product to be used per acre. Apply this amount of this product to the volume of fertilizer to be applied per acre. To impregnate dry bulk fertilizer, mix the amount of this product as prescribed above in a sufficient quantity of water to uniformly coat the desired amount of fertilizer. Suspensions of this product will require thorough agitation. Direct the spray nozzles to deliver a fine spray of the mixture toward the fertilizer for uniform coverage. The use of a colorant or dye may be beneficial to visually determine the uniformity of impregnation.

Impregnation of this product to dry bulk fertilizer may vary. If absorption of the impregnating spray by the fertilizer is not adequate, the use of an absorptive powder or additive, e.g. MicroCel E (Celite Corporation) or HiSill – 233 (PPG Industries Ohio, Inc.) may be required to produce a dry, free-flowing mixture.

Apply impregnated fertilizer as soon as possible after impregnation for optimum performance. Impregnated fertilizer may become lumpy and difficult to apply following storage. Uniform and precise application of the fertilizer impregnated with this product is essential for satisfactory weed control and to minimize tree injury.

Follow the instructions for spray tank cleanout on this label for cleaning the equipment used to impregnate, transport, and apply the fertilizer.

Low rates of this product can kill or severely injure most crops. Following an application of this product, the use of spray equipment to apply other pesticides to crops on which this product is not registered may result in their damage. The most effective way to reduce crop damage potential is to use designated mixing and application equipment.

### BROADCAST APPLICATION

Applications may be made by ground or air (helicopter or fixed wing aircraft).

Accurate calibration of the application equipment is essential for uniform distribution on the soil surface. Overlaps or skips between adjoining swaths or non-uniform distribution of impregnated fertilizer with the swath will deliver poor results and may result in tree injury or mortality.

## HARDWOODS

### Hardwood Site Preparation - Application Before Transplanting

Apply 3.0 to 4.25 ounces (0.14-0.20 lb. ai) per acre on sites where northern red oak, white oak, chestnut oak, American sycamore, ash (green or white), red maple, sweetgum, or yellow poplar are to be planted. Make all applications before transplanting.

**West:** For hybrid poplar west of the Cascade Mountains, apply 0.5 to 1.25 ounces (0.023-0.059 lb. ai) per acre. Use 1.0 to 1.25 ounces (0.047-0.059 lb. ai) per acre for heavy weed infestations and where maximum residual control is desired. Use 0.5 to 0.75 ounce (0.023-0.035 lb. ai) per acre for light weed infestations or where small diameter cuttings are to be planted. Allow a minimum of 3 days between application and planting. Limit the first use to a small area to determine the selectivity of this product on specific clones. This product must be activated by rainfall or overhead irrigation before weeds become well established. Use of this product may cause temporary chlorosis (yellowing) or a small reduction in tree height during the year of use.

### Hardwood Release - Application After Transplanting

Apply 1.0 to 4.0 ounces (0.047-0.188 lb. ai) per acre in stands of American sycamore, ash (green or white), bald cypress, oaks (including chestnut, cherrybark, northern red, overcup, pin, southern red, swamp chestnut, water, white, etc.), red maple, sweetgum, or yellow poplar.

Apply this product before the hardwood tree seedlings or transplants break dormancy (bud swell stage). Applications made over the top after the trees have broken dormancy may injure or kill the trees.

**West:** For hybrid poplar west of the Cascade Mountains, apply 0.5 to 1.25 ounces (0.023-0.059 lb. ai) per acre. Use 1.0 to 1.25 ounces (0.047-0.059 lb. ai) per acre for heavy weed infestations and where maximum residual control is desired.

Use 0.5 to 0.75 ounce (0.023-0.035 lb. ai) per acre for light weed infestations or when small diameter cuttings have been planted. Apply only to trees which have been established for a minimum of 1 year. Apply when the trees are dormant and avoid contact of the spray with green buds or tissue as injury to the trees may result. Avoid applications during the period when the hybrid poplar are actively growing; from bud-swell in the spring to leaf drop in the fall. Limit the first use to a small area to determine the selectivity of this product on specific clones. This product must be activated by rainfall or overhead irrigation before weeds become well established. Use of this product may cause temporary chlorosis (yellowing) or a small reduction in tree height during the year of use.

**Lake States:** For hybrid poplar in the Lake States, apply at the rate of 1.0 to 2.0 ounces (0.047-0.094 lb. ai) per acre in the fall or early winter. For late winter or early spring applications, use 1.0 ounce (0.047 lb. ai) per acre. Apply when the trees are dormant and avoid contact of the spray with green buds or tissue as injury to the trees may result. Avoid applications during the period when the hybrid Poplar are actively growing; from bud-swell in the spring to leaf drop in the fall. Apply only to trees which have been established for a minimum of 1 year. Limit the first use to a small area to determine the selectivity of this product on specific clones. Use of this product may cause temporary chlorosis (yellowing) or a small reduction in tree height during the year of use.

#### **Natural Hardwood Regeneration**

This product may be used for herbaceous weed control in commercial reforestation areas where hardwood seedling regeneration is desired following shelterwood seed cuts. Apply 2.0 to 4.25 ounces (0.094-0.20 lb. ai) per acre using appropriate ground equipment. For control of striped maple and beech, tank mix with the labeled rate of glyphosate per acre. For best results, apply from late summer to mid-fall.

**NOTE:** Hardwood seedlings present at the time of application may be severely injured or killed.

## **NON-AGRICULTURAL USES**

### **NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Use on non-crop sites and turf (unimproved) are not within the scope of the Worker Protection Standard.

Do not enter or allow worker entry into treated areas until sprays have dried.

### **NON-AGRICULTURAL (INDUSTRIAL) SITES**

#### **Application Information**

This product controls weeds on the following private, public and military non-crop sites including airports, highway, military installations, fence rows, barrier strips, farmyards, roadsides and associated rights-of-way, lumberyards, petroleum tank farms, pipeline and utility rights-of-way, pumping installations, railroads, storage areas, plant sites, sewage disposal areas, fuel storage areas, and tank farms

This product is not labeled for use on recreation areas, sod farms or for direct application to paved areas (surfaces).

In the states of Louisiana and Texas, this product may be used for weed control on dry, drainage ditch banks. Do not apply in or on irrigation ditches or canals, including their outer banks.

Apply by ground or helicopter only.

Combination with other herbicides broadens the spectrum of weeds controlled. In addition, total vegetation control can be achieved with higher rates of this product plus residual type companion herbicides. To improve the control of weeds, add surfactant at 0.25% by volume.

### **AREAS OF 20" OR LESS ANNUAL RAINFALL (ARID AREAS)**

#### **Application Timing**

Apply this product as a preemergence or early postemergence spray during the rainy season when weeds are actively germinating or growing.

#### **Weeds Controlled**

This product effectively controls the following broadleaf weeds and grasses when applied at the rates shown.

#### **Application Rates**

Apply this product at the rates indicated by weed type. When applied at lower rates, this product provides short-term control of weeds listed; when applied at higher rates, weed control is extended.

**Broadleaf Weeds – 1.33 to 2 ounces (0.063-0.094 lb. ai) per acre**

Annual sowthistle	Common mallow	Spreading orach
Black mustard	Common speedwell	Sunflower
Buckhorn plantain	Common yarrow	Western ragweed
Burclover	Curly dock	Whitestem filaree
Carolina geranium	Prickly Coontail	
Chickweed	Seaside heliotrope	

**Grasses (up to 6 to 12" tall) – 0.75 to 1.5 ounces (0.035-0.070 lb. ai) per acre**

Cheat	Downy brome	Medusahead
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**Grasses (up to 6 to 12" tall) – 1.33 to 2.0 ounces (0.063-0.094 lb. ai) per acre**

Annual bluegrass	Italian ryegrass	Ripgut brome
Barnyardgrass	Jointed goatgrass	Seashore saltgrass
Foxtail barley	Red brome	Signalgrass
Foxtail fescue	Reed canarygrass	Yellow foxtail

**Grasses – 2.0 to 3.0 ounces (0.094-0.14 lb. ai) per acre**

Smooth Brome

The weeds listed in **AREAS OF 20" OR MORE ANNUAL RAINFALL** can also be controlled in arid areas; however, this product must be applied at 3.0 to 6.0 ounces per acre to control those weeds. These higher rates also provide control of severe infestations and longer term control of weeds listed for arid areas.

**AREAS OF 20" OR MORE ANNUAL RAINFALL**

**Application Timing**

Apply this product as a preemergence or early postemergence spray during the rainy season when weeds are actively germinating or growing.

**Weeds Controlled**

This product effectively controls the following broadleaf weeds and grasses when applied at the rates shown.

**Application Rates**

Apply this product at the rates indicated by weed type. When applied at lower rates, this product provides short term control of weeds listed; when applied at higher rates, weed control is extended.

**Broadleaf Weeds – 3.0 to 5.0 ounces (0.14-0.234 lb. ai) per acre**

Annual sowthistle	Dogfennel	Sunflower
Bouncingbet	Hoary cress (whitetop)	Sweet clover
Burclover	Little mallow	Tansy mustard
Carolina geranium	Mustard	Tansy ragwort
Common chickweed	Ox-eye daisy	Tumble mustard
Common dandelion	Pepperweed	Vetch
Common speedwell	Pigweed	Wild carrot
Common yarrow	Purple starthistle	Wild oats
Crimson clover	Ragweed	Yellow rocket

**Broadleaf Weeds – 6.0 ounces (0.281 lb. ai) per acre**

Bedstraw	Horsetail (Equisetum)	Turkey mullein
Canada thistle	Kudzu	Wild blackberry
Curly dock	Musk thistle	
Goldenrod	Redstem filaree	

**Grasses – 3.0 to 5.0 ounces (0.14-0.234 lb. ai) per acre**

Alta fescue	Foxtails (except green)	Red fescue
Annual bluegrass	Foxtail barley	Reed canarygrass
Annual ryegrass	Indiangrass	Ripgut brome
Bahiagrass	Italian ryegrass	Ryegrass
Barnyardgrass	Kentucky bluegrass	Smooth brome
Downy brome	Little barley	Sprangletop (annual)
Fescue	Red brome	Wheat (volunteer)

**Grasses – 6.0 ounces (0.281 lb. ai) per acre**

Johnsongrass

For short-term (up to 3 months) control of johnsongrass, apply early postemergence. Repeat treatment if additional control is desired or if regrowth occurs.

**Note:** Use the higher dosage ranges under the following conditions: heavy weed growth; soils containing more than 2.5% organic matter; and high soil moisture areas, including along road edges or railroad shoulders.

For planting areas treated with this product refer to the GRASS REPLANT INTERVALS section of this label.

## **SPECIFIC WEED PROBLEMS NON-CROP SITES**

### **Kochia, Russian thistle, and Prickly Lettuce**

Since biotypes of Kochia, Russian thistle, and prickly lettuce are known to be resistant to this product, tank mixture combinations with herbicides having different modes of action, including diuron, bromacil, or diuron and bromacil, must be used. In areas where resistance is known to exist, these weeds need to be treated postemergence with other herbicides registered for their control, e.g. 2,4-D or dicamba. **DO NOT** allow kochia, Russian thistle, or prickly lettuce to form mature seed.

### **TANK MIX COMBINATIONS**

To improve preemergence to early postemergence control of weeds and grasses, add 2.0 to 6.0 ounces (0.094-0.28 lb. ai) of this product per acre. Apply this product plus a companion herbicide at the rates and timing as shown on package labels for target weeds. For application method and other use specifications, use the most restrictive directions for the intended combination. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**DO NOT** tank mix this product with Bromacil.

## **UNDER ASPHALT AND CONCRETE PAVEMENT**

### **Application Information**

This product can be used to control weeds under asphalt and concrete pavement, including parking lots, highway shoulders, median strips, roadways, and other industrial sites.

This product will not control tubers, rhizomes, woody vegetation including small trees, brush or woody vines.

This product must only be used in an area that has been prepared according to good construction practices. Use sufficient water to ensure uniform coverage, generally 100 gal. per acre. Agitate the tank continuously to keep this product in suspension.

### **Application Timing**

This product needs to be applied immediately before paving to avoid lateral movement of the herbicide as a result of soil movement due to rainfall or mechanical means.

### **Application Rate**

Apply this product at 4.0 to 6.0 ounces (0.19-0.28 lb. ai) per acre. Use a higher rate on hard-to-control weeds and for long-term control.

### **Tank Mix Combinations -Under Asphalt and Concrete Pavement**

For broader spectrum control or for an extended period of control under asphalt or concrete pavement, this product may be applied as a tank mix with the labeled rate of Bromacil.

## **USE RESTRICTIONS - UNDER ASPHALT**

- Do not use this product under pavement in residential properties including driveways, or in recreational areas, including jogging or bike paths, tennis courts, or golf cart paths.
- Do not apply more than 8.0 ounces (0.375 lb. ai) of this product per acre per year. Do not apply more than 6.0 ounces (0.281 lb. ai) of this product per acre per single application. Repeat applications may be made, however, do not exceed an additional 2.0 ounces (0.094 lb. ai) of this product per acre per year.
- Do not apply more than two applications per year for all uses with a minimum of 30 days between applications.

## **USE PRECAUTIONS - UNDER ASPHALT**

- Desirable plants may be injured if their roots extend into treated areas or if planted in treated areas.

## **INDUSTRIAL TURFGRASS**

### **Application Information**

This product is used to control weeds on unimproved industrial turf, on roadsides, or on other non-crop sites where the turfgrass is well established as a ground cover. Applications may temporarily suppress grass growth and inhibit seedhead formation (chemical mowing).

### **Bermudagrass Release**

#### **Application Timing**

Apply this product after bermudagrass has broken dormancy and is well established, usually 30 days after initial spring flush. If additional applications are necessary, apply this product again during late spring to early summer. On established weeds, apply this product 1 to 2 weeks after mowing for the best results.

This product may also be applied in late fall or early winter. Use the lower rates on small seedling weeds and a higher rate on larger weeds. Also, refer to the listing of Weeds Controlled under Non-crop (Industrial) Weed Control.

### **Weeds Controlled**

This product may be used to control the following weeds when applied at the use rates shown.

**Late Spring to Early Summer – 1.0 to 2.0 ounces (0.047-0.094 lb. ai) per acre**

Carolina geranium	Foxtail	Spotted Spurge
Fescue	Goldenrod	Wild carrot

**Spring to Fall – 2.0 to 3.0 ounces (0.094-0.14 lb. ai) per acre**

Johnsongrass

**Late Fall to Early Winter – 1.0 to 4.0 ounces (0.047-0.188 lb. ai) per acre**

Carolina geranium	Fescue	Wild blackberry
Common chickweed	Little barley	

**Tank Mix Combinations – Bermudagrass (South Only)** Apply 1 to 2 ounces (0.047-0.094 lb. ai) of this product per acre as a tank mix with the labeled rate of MSMA per acre on well-established bermudagrass during the summer. Refer to MSMA package label for a list of additional weeds that may be controlled. Two or more sequential applications of MSMA alone may be necessary to maintain weed control. It is the pesticide user's responsibility to ensure that all product labels are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Centipedegrass Release**

**Application timing**

Apply 1.0 to 2.0 ounces (0.047-0.094 lb. ai) of this product per acre in the fall or early winter, or in the early summer following greenup of the centipedegrass. Refer to the listing of Weeds Controlled under Bermudagrass Release.

**Bahiagrass Release and Seedhead Suppression**

**Application Timing**

Apply 1.0 to 2.0 ounces (0.047-0.094 lb. ai) of this product per acre to turfgrass after green-up and before seedheads emerge (boot stage). Ensure that desirable grasses are well established at application, as premature treatment may result in top kill and stand reduction of desirable turf. Make only one application per year.

**Smooth Brome and Crested Wheatgrass Release and Suppression**

**Application Timing**

Apply 1.0 ounce (0.047 lb. ai) of this product per acre to turfgrass after green-up and before seedheads emerge (boot stage). Ensure that desirable grasses are well established at application, as premature treatment may result in top kill and stand reduction of desirable turf. Make only one application per year.

**Weeds Controlled**

This product may be used to control the following weeds when applied at the use rates shown.

**Late Spring to Early Summer – 1.0 ounce (0.047 lb. ai) per acre**

Downy Brome	Goldenrod	Foxtail
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**USE RESTRICTIONS - INDUSTRIAL TURFGRASS**

- Do not apply more than 8.0 ounces (0.375 lb. ai) of this product per acre per year.
- Do not apply more than 6.0 ounces (0.281 lb. ai) of this product per acre per single application. Repeat applications may be made, however, do not exceed an additional 2.0 ounces (0.094 lb. ai) of this product per acre per year.
- Do not apply more than two applications per year for all uses with a minimum of 30 days between applications.

**USE PRECAUTIONS – INDUSTRIAL TURFGRASS**

- Excessive injury to turf may result if a surfactant is used with this product applications made to actively growing turf. The user assumes all responsibility for turf injury if a surfactant is used with this product treatments applied to actively growing turf to the extent consistent with applicable law.
- This product may temporarily discolor or cause top kill of turf grasses. Applications made while turf is dormant may delay green-up in the spring.
- Annual retreatments may reduce vigor, particularly at the higher specified rates, where bahiagrass, crested wheatgrass and smooth brome are grown.
- Applications of this product on turf that is under stress from drought, insects, disease, cold temperatures or late spring frost may result in injury.

**GRASS REPLANT INTERVALS**

Following a treatment with this product at use rates up to 2.0 ounces (0.094 lbs. ai) per acre the following grasses may be replanted at least 3 months after a spring application:

Green needlegrass, meadow brome, Russian wild rye and switch grass.

The following grasses may be replanted at least 6 months after a spring application: Alta fescue, meadow foxtail, orchard grass, smooth brome, sheep fescue and western wheatgrass.

The intervals are for soils with a pH of less than or equal to 7.5. Soils having a pH greater than 7.5 will require longer intervals. The intervals are for applications made in the spring. Because degradation of this product is slowed by cold or frozen soils, applications made in the fall need to consider the intervals as beginning in the spring following treatment.

Testing has indicated that there is considerable variation in response among species and types of grasses when seeded into areas treated with this product. If species other than those listed above are to be planted into areas treated with this product a field bioassay needs to be performed, or previous experience may be used to determine the feasibility of replanting treated areas.

To conduct a field bioassay, grow to mature test strips of the grass(es) you plan to grow the following year. The test strips must cross the entire field including knolls and low areas. Crop response to the bioassay will indicate whether or not to plant the grass(es) grown in the test strips.

### **ADDITIONAL INSTRUCTIONS AND RESTRICTIONS FOR AGRICULTURAL AND NON-AGRICULTURAL USES**

- Do not apply more than 8.0 ounces (0.375 lb. ai) of this product per acre per year.
  - Do not apply more than 4.25 ounces (0.20 lb. ai) of this product per acre per single application to an agricultural site. Repeat applications may be made, however, do not exceed an additional 3.75 ounces (0.176 lb. ai) of this product per acre per year to an agricultural site.
- Do not apply more than 6.0 ounces (0.281 lb. ai) of this product per acre per single application to a non-agricultural site. Repeat applications may be made, however, do not exceed an additional 2 ounces (0.094 lb. ai) of this product per acre per year to a non-agricultural site. Do not apply more than two applications per year for all uses.
- Do not treat frozen or snow covered soil.
- Do not use on lawns, walks, driveways, or tennis courts.
- Do not apply in or on irrigation ditches or canals including their outer banks.
- Do not apply through any type of irrigation system.
- Do not use this product in the following counties of Colorado: Saguache, Rio Grande, Alamosa, Costilla and Conejos.
- Do not use on food or feed crops. Do not use on sod farms.

### **ADDITIONAL INSTRUCTIONS AND PRECAUTIONS FOR AGRICULTURAL AND NON-AGRICULTURAL USES**

- Injury or loss may occur if equipment is drained or flushed on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots.
- Leave treated soil undisturbed to reduce the potential for this product's movement by soil erosion due to wind or water.
- Treatment of powdery, dry soil or light, sandy soil when there is little likelihood of rainfall soon after treatment may result in off-target movement and possible damage to susceptible crops when soil particles are moved by wind or water. Injury to crops may result if treated soil is washed, blown, or moved onto land used to produce crops. Exposure to this product may injure or kill most crops. Injury may be more severe when the crops are irrigated. Do not apply this product when these conditions are identified and powdery, dry soil, or light or sandy soil are known to be prevalent in the area to be treated.
- Applications made where runoff water flows onto agricultural land may injure crops. Applications made during periods of intense rainfall, to soils saturated with water, surfaces paved with materials including asphalt or concrete, or soils through which rainfall will not readily penetrate may result in runoff and movement of this product.
- Keep from contact with fertilizers, insecticides, fungicides, and seeds.
- Low rates of this product can kill or severely injure most crops. Following an application of this product, the use of spray equipment to apply other pesticides to crops on which this product is not registered may result in their damage. The most effective way to reduce this crop damage potential is to use dedicated mixing and application equipment.
- If non-crop or forested sites treated with this product are to be converted to a food, feed, or fiber agricultural crop, or to a horticultural crop, do not plant the treated sites for at least one year after this product's application. A field bioassay must then be completed before planting to crops.

### **FIELD BIOASSAY**

To conduct a field bioassay, grow to mature test strips of the grass(es) you plan to grow the following year. The test strips must cross the entire field including knolls and low areas. Crop response to the bioassay will indicate whether or not to plant the grass(es) grown in the test strips. In the case of suspected off-site movement of this product to cropland, soil samples need to be quantitatively analyzed for this product or any other herbicide which could be having an adverse effect on the crop, in addition to conducting the above-described bioassay.

## SPRAY EQUIPMENT

Low rates of this product can kill or severely injure most crops. Following an application of this product, the use of spray equipment to apply other pesticides to crops on which this product is not registered may result in their damage. The most effective way to reduce this crop damage potential is to use dedicated mixing and application equipment.

## APPLICATION

### Ground

Use a sufficient volume of water to ensure thorough coverage when applying this product as a broadcast or directed spray. Select a spray volume and delivery system that will ensure thorough coverage and a uniform spray pattern. Be sure the sprayer is calibrated before use. Avoid overlapping and shut off spray booms while starting, turning, slowing, or stopping to avoid injury to desired species.

### Air

Select a spray volume and delivery system that will ensure thorough coverage and a uniform spray pattern. Be sure the sprayer is calibrated. Avoid overlapping and shut off spray booms while starting, turning, slowing, or stopping to avoid injury to desired species.

## MIXING INSTRUCTIONS

1. Fill spray tank 1/2 full of water.
2. With the agitator running, add the proper amount of this product.
3. If using a companion product, add the specified amount.
4. For postemergent applications, add the proper amount of spray adjuvants (i.e. surfactants, drift control agents, etc.).
5. Add the remaining water.
6. Agitate the spray tank thoroughly.

Use the spray preparation within 24 hours to avoid product degradation. If the spray preparation is left standing, agitate it thoroughly before using.

## SPRAYER CLEANUP

Thoroughly clean all mixing and spray equipment following applications of this product as follows:

1. Drain tank; thoroughly rinse spray tanks, boom, and hose with clean water.
2. Fill the tank with clean water and 1 gallon of household ammonia (contains 3% active) for every 100 gallons of water. Flush the hoses, boom, and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hose for at least 15 min. Flush the hoses, boom, and nozzles again with the cleaning solution, and then drain the tank. Equivalent amounts of an alternate-strength ammonia solution or a commercial cleaner can be used in the cleanout procedure. If a commercial cleaner is used, carefully read and follow the individual cleaner instructions.
3. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
4. Repeat step 2.
5. Rinse the tank, boom, and hoses with clean water.
6. Dispose of the rinsate on a labeled site or at an approved waste disposal facility. If a commercial cleaner is used follow the directions for rinsate disposal on the label.

Notes:

- **DO NOT** use chlorine bleach with ammonia, as dangerous gases will form. **DO NOT** clean equipment in an enclosed area.
- Steam-cleaning aerial spray tanks is directed before performing the above cleanout procedure to facilitate the removal of any caked deposits.
- When this product is tank mixed with other pesticides, all required cleanout procedures must be examined and the most rigorous procedure must be followed.

## AIR ASSISTED (AIR BLAST) FIELD CROP SPRAYERS

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, that it is configured properly, and that drift potential has been minimized.

Note: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Read the specific crop use and application equipment instructions to determine if an air assisted field crop sprayer can be used.

## DRIFT CONTROL ADDITIVES

Using product compatible drift control additives can reduce drift potential. When a drift control additive is used, read and carefully observe cautionary statements and all other information on the additive's label. If using an additive that increases viscosity, ensure that the nozzles and other application equipment will function properly with a viscous spray solution. Preferred drift control additives have been certified by the Chemical Producers and Distributors Association (CPDA).

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE:** Store product in original container only.

**PRODUCT DISPOSAL:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

### CONTAINER HANDLING:

[**Note to Reviewer:** The following statement will be included on all Final Printed Labels bearing multiple Container Disposal (Container Handling) statements] **NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable "No refillable" or "Refillable" designation. Follow the container disposal [handling] instructions below that apply to your container type / size."

[**Note to Reviewer:** The bracketed section headers will be included when multiple container types / sizes are listed on the label.]

**[Nonrefillable Containers 5 gallons or less:]** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

**[Nonrefillable containers larger than 5 gallons:]** Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Offer for recycling if available. If recycling or reconditioning not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

## WARRANTY DISCLAIMER

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